REMARKS

Applicants' attorney thanks the Examiner for her comments. Independent Claims 1, 28, 38 and 39 have been amended to recite a range of "about 20% to about 50% by weight" of the thermoplastic elastomer. This amendment is supported on page 16, lines 16-19. The independent claims have been further amended to define the elastomer from among several polymers previously listed in Claim 5, which do not include polystyrene graft copolymers. High-impact polystyrene is a graft copolymer as indicated in Exh. B to the previous Amendment After Final Rejection.

The Examiner has alleged that the polystyrene trays of U.S. Patent 6,093,751 ("Federico") are soft and flexible. Applicants disagree, and further note that Federico describes "polystyrene" in a strict and narrow sense, as meaning "polystyrene as such, that is, not incorporating hydrocarbons" (Col. 2, lines 38-39). On the other hand, Applicants appreciate that when a rigid polymer such as polystyrene is employed as the base resin, a higher amount of elastomer is needed to render the overall foam composition soft and flexible, and to lower its density by an amount needed to achieve these properties. This is consistent with Applicants' Examples on pages 25-27 of the specification, and the claim amendments requiring a higher amount of elastomers.

Applicants disagree that the phrase "soft and flexible" is not defined. Applicants have quantified this phrase in independent Claims 1, 28, 38 and 39 as meaning "a compression resistance of about 20% compression set or less." As explained on page 10, lines 20-24, the compression resistance is indicative of softness, flexibility, elasticity and resiliency.

a) Claim Rejection Based On Federico In View Of Miller

The rejection of Claims 1, 2 and 5-39 under 35 U.S.C. § 103(a) as obvious over U.S. Patent 6,093,751 ("Federico") in view of U.S. Patent 6,286,046 ("Miller") is respectfully traversed.

The Examiner opines that Federico discloses "high impact polystyrene thermoplastic elastomer" in amounts of up to 30% by weight. The Examiner further opines that it would have been obvious to substitute di-block and tri-block copolymers disclosed in Miller, into the composition of Federico. However, Federico does not disclose or suggest a soft, flexible foam having a compression resistance of about 20% compression

set or less, and does not disclose a thermoplastic elastomer as defined by the Markush group in every independent claim.

As explained in the previous Office Action response, high impact polystyrene ("HIPS") as disclosed in Federico occupies a separate status in the art from polymers typically referred to as thermoplastic elastomers. As described in Exh. B attached to the previous response, HIPS is made by dissolving a small amount of rubber (e.g. polybutadiene) in a polystyrene matrix, chemically reacting (grafting) the polystyrene chains and the rubber, and chemically crosslinking the rubber. HIPS alleviates the brittleness of conventional polystyrene by providing a polymer having increased elongation, ductility and environmental stress crack resistance. HIPS is used in various injection molding and extrusion processes for making toys, appliance parts, packaging and furniture.

Yet HIPS does not contain enough rubber to impart softness as would an elastomer. When HIPS is stretched, it exhibits stress whitening and decrease in density, both occurring without lateral contraction. HIPS contains just enough grafted and crosslinked rubber to overcome the brittleness associated with polystyrene, provide improved impact strength and some elongation.

Federico teaches that the HIPS added is a "shock-resistant polystyrene" (Col. 3, lines 16-21). Shock resistance may be a desirable attribute in the art of polystyrene food trays, to which Federico is directed. Food trays need to be fairly rigid and inflexible and able to withstand impact when dropped.

In order to further illustrate these differences, Claims 1, 28, 38 and 39 have been amended to recite a Markush group for the thermoplastic elastomer. The Markush group does not include HIPS. HIPS is outside the scope of Applicants' claims for this additional reason.

Miller discloses that an elastomeric rubber can be added to facilitate processing of a foamable mixture in an extruder and enhance relaxation of resulting closed-cell foam bodies (Col. 7, lines 18-37). The resulting foam bodies (e.g., foam boards and foam structures) reflect applications where a rigid or hard foam may be useful, as opposed to one which is soft and flexible. Accordingly, the amount of elastomeric rubber is limited to about 0.1-10 parts by weight of elastomeric rubber for every 100 parts by weight of styrene base polymer (Col. 7, lines 32-38). This means that the elastomeric rubber can be

used at up to 10/110, or about 8.9% of the combined weight of styrenic base polymer and elastomeric rubber.

Miller does not disclose an absorbent, open-celled foam, and does not disclose a foam having about 20% to about 50% by weight of a thermoplastic elastomer as required by Applicants' claims. The claimed elastomer content helps the inventive foam to have softness, resiliency and a high percentage of open cells, all of which facilitate use of the foam as an absorbent member in a personal care absorbent article. Miller does not disclose this type of foam. The closed-cell foam boards and other foam bodies of Miller are not designed for absorbent structures such as diapers, training pants, swimwear, feminine hygiene articles or other personal care absorbent articles.

There is no suggestion in the art to combine Federico with Miller. The former is directed to absorbent meat trays having shock resistance. The latter is directed to nonabsorbent, closed-cell foam bodies useful for foam boards and foam insulation. The fields of art addressed by the two references are so divergent from one another that persons skilled in the art would have no motivation to combine the references absent a specific suggestion in the art to do so. Persons skilled in the art, interested in making soft, flexible absorbent foams, would likely not consult the art of rigid polystyrene meat trays, and definitely would not consult the art of closed-cell foam bodies used for boards and insulation. The Examiner has made no showing to the contrary. There is no suggestion in the art to combine these references.

To the contrary, an elastomer other than HIPS (which causes shock resistance) would undermine the objectives of Federico by rendering the food trays too soft and flexible for their intended purpose. Prior art cannot be combined where the combination would undermine the objectives of the primary reference. See MPEP 2143.01.

b) Conclusion

For these reasons, the claim rejection based on Federico in view of Miller should be withdrawn.

Applicants believe that the claims, as presented, are in condition for allowance. Applicants have scheduled a telephone interview with Examiner Zemel on 09 December 2006 at 10:30 A.M. EST, and are enclosing 2-inch by 4-inch foam samples for use at the interview. The foam samples, which are described on the enclosed chart as Samples 5, 6, 25, 26 and 32, illustrate that foam samples made using 20% or more styrene-based thermoplastic elastomer have greater softness and flexibility than either a) foam samples made using 20% high impact polystyrene or b) foam samples made using less than 20% styrene-based thermoplastic elastomer. If any issues remain unresolved, then Applicants' attorney looks forward to resolving them at the telephone interview.

Respectfully submitted,

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